## UNITED STATES DEPARTMENT of the INTERIOR

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FEATURE MATERIAL

BIRTH CONTROL IS LATEST WEAPON AGAINST COYOTE

Coyotes, the little "bad guys" of the western plains, have been shot, trapped, poisoned, pursued by dog packs, hunted from horseback and airplanes. For many years in several States, they carried a price on their curning heads. Yet they survived and, virtually alone among American predators, even extended the range of their operations.

Today there are probably more than a half million coyotes in the United States, about 85 to 90 percent of them west of the Mississippi. Now, they face an adversary that may prove their most formidable and at the same time the most humane: birth control. Trails of a new technique conducted in New Mexico by the Department of the Interior's Bureau of Sport Fisheries and Wildlife reveals its promise as a control measure against the unconquered coyote.

While the coyote population has increased rapidly in the past few years, so too has the number of human visitors to the western range: hunters, fishermen, campers, hikers, photographers, rock collectors, and just plain tourists. It has become increasingly difficult to manage the coyote population for fear of harming humans and their dogs. Poisons designed to kill the canine family, to which the coyote belongs, cannot be used where either pets or people might find them.

As control methods become more difficult, the depredations of the coyotes increase. To the sheepman, he is potential enemy number one. Sheepmen, raisers of mohair goats, and poultrymen all have suffered losses in recent years. In local communities of Texas and Oklahoma and some other States, losses among newborn calves have been heavy.

Something safe to use in areas frequented by people and efficient and humane against coyotes was needed. The Bureau's Denver Wildlife Research Center came up with the idea of birth control. The chemical <u>stilbestrol</u>, a synthetic female

hormone, would be part of the bait fed to coyotes during their breeding season. A female coyote which ate the bait at a certain time would not become pregnant.

Stilbestrol is most effective during the first 15 days of the coyote's breeding period; there after, larger or repeated doses are needed to prevent pregnancy. This works for 45 days of the 63-day period of pregnancy. After that time, it has no effect.

The birth-control technique, which has no other side effects on the coyote, does not harm domestic dogs as the latter animals have at least two breeding cycles a year. Also coyotes usually breed earlier in the year than most wild carnivores. Baits placed for coyotes are put out and deteriorate before the breeding season of other species.

Five areas in New Mexico were treated last year shortly after the peak of the breeding season, the second week in March. Three of the five areas had small coyote populations. Two--Fort Bliss Military Reservation and the Malaga area, near Carlsbad--had large populations.

In Idaho, baits were placed in only one area--Mountain Home Desert, near Boise--in the last week of January, much before the peak of mating in that area.

Planes dropped the baits in selected test areas in both States and, a week later, trappers placed the remainder. The baits were located at rimrocks, stream bottoms, on the preferred lanes of coyote travel, and especially near water holes. An average of 11 or 12 baits per square mile was left.

Reproductive tracts were obtained from coyotes taken in other areas of New Mexico and Idaho to establish a "normal" reproductive rate with which to compare the rate obtained in the treated areas. The collections of reproductive tracts were made at least 25 miles from the treated areas to reduce the chance that any treated coyotes might have been taken outside of the test areas.

Collections did not begin until early April, when nearly all female coyotes had either whelped or were carrying well-developed embryos. This procedure is important because the success or failure of the test depended on the percentage of barren females in the sample.

In New Mexico, the Fort Bliss and Malaga areas provided adequate samples; the three areas with small coyote populations did not. Examination of the reproductive tracts showed that in the Fort Bliss test 48 of 60 (80 percent) mature females had not been successful in giving birth. In Malaga, of 33 mature females, 16 (48 percent) were not successful. In 1963, the first trial of stilbestrol was conducted in Malaga, and 80 percent of the females failed to reproduce.

In Idaho, the early placements of baits had been aimed primarily at blocking ovulation. This test failed. In the treated area, reproduction was 89 percent successful; in the untreated reference area, 100 percent.

Will stilbestrol mean the eventual extinction of coyotes? The Bureau scientists in Denver say not. They do not even see it as a possible extermination measure, but as an additional control tool that will be safe, acceptable, and economically effective to help keep coyote numbers at tolerable levels.

The villain in the drama is no ordinary villain. The coyote is better looking than many of his critics say. Many coyotes resemble collie dogs and "toy shepherds," though they are slenderer. The coyote weighs between 18 and 30 pounds.

Although he occurs in a number of colors, he is generally light gray and reddish or brownish yellow, with black and white interspersed over parts of his body. He has a long, narrow, pointed nose, small rounded nose pads, large pointed ears, slender legs, small feet, and a bushy tail. He has an acute sense of smell, alert hearing, and keen eyesight. The old animals who have survived hunters' pursuit are very cunning, indeed. Coyotes live 10 to 18 years.

The coyote, "chatterer of American predators," has many voices, but his main one is a high, trembling, staccato "yip-yap." It was described once as a "prolonged howl which the animal let out and then ran after and bit into small pieces." The coyote is usually silent during the day and is generally heard at any time between sunset and sunrise. Twilight and the breaking of dawn are his favorite "yip-yap" periods. A chorus of coyotes is a wild medley and memorable.

As a rule, coyotes do not select life-long mates, but some pairs may remain together several years. The coyote is prolific--the average litter runs between 5 and 6. One female is known to have produced 19. They use dens when bringing forth and rearing their young, and many return to the same general locality year after year. Females breed when they are about one year old. The pups are born about 63 days after conception and emerge from the dens when they are about three weeks old. When they are 8 to 10 weeks old, the dens are abandoned and the whole family roves about together until early fall.

Coyotes are particularly destructive during the denning season because of their greater need for food for themselves and their young. The lambing of sheep and the nesting of game birds occur at approximately the same time--and both suffer from coyote attacks.

Coyotes are the most destructive flesh-eaters in the United States. They kill the barnyard hen and the small livestock—the stockman's and farmer's beef, mutton, and poultry. They do most of their killing early in the morning. Unlike the large gray wolf, they attack from the front, and so the head and throat of the prey will show more mutilation than the rear quarters. Lambs are sometimes found with their throats nearly severed. The parent coyotes gorge on the meat, then return to the den and disgorge portions around the entrance for their pups. Coyotes also eat the carcasses of other coyotes.

A single coyote can kill a 200-pound buck if the deer is fenced in; 2 or 3 coyotes can kill a healthy buck in open country. Generally, they give chase in pairs and often show human-like cunning in running down their prey. To complete

the list of skills, they are good swimmers, have much stamina and are extremely adaptable to civilization.

Few people hate the little bad guys and most, even the sheep owner, have a sneaking affection for them. One admirer wrote: "The night song of the coyote is as much a part of the West--and of America itself--as the Grand Canyon of the Great Plains." Another said that he liked to "hear its yap with the setting of the western sun." But even admirers wish, probably for the coyote's sake, that he would quit killing livestock.

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